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ERTS AND AIRCRAFT MULTISPECTRAL SCANNER DIGITAL DATA USERS MANUAL
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Programs and their control cards in current use by the Office for Remote Sensing of Earth Resources (ORSER) at Penn State are described. These include programs of the following types: 1) a program to obtain information about the contents of a tape from the tape internal label, 2) a subsetting program, 3) programs for creating brightness and uniformity maps, 4) a program to obtain basic statistics for user-defined small blocks of data, 5) supervised classifiers which classify data from a set of user-specified spectral signatures according to the angle or distance of separation, 6) unsupervised classifiers which develop their own set of spectral signatures using a clustering algorithm, 7) a program using the method of canonical analysis to derive an orthogonal transformation which maximizes category separability on as few axes as possible, 8) a classification and mapping program based on the ratio of two selected channels of data, 9) a program which merges data from two different passes of ERTS over the same area, 10) a program which compares, element by element, two digital classification maps of the same ground area, 11) a series of classifiers employing the linear discriminant function, and 12) a series of classifiers employing the quadratic discriminant function. The digital aircraft multispectral scanner data tape format used by ORSER is also described. Instructions and examples of computer processing of both ERTS and aircraft multispectral scanner data, using cards or the Remote Job Entry terminal, are included.